

Fig. 1

0045665-10099

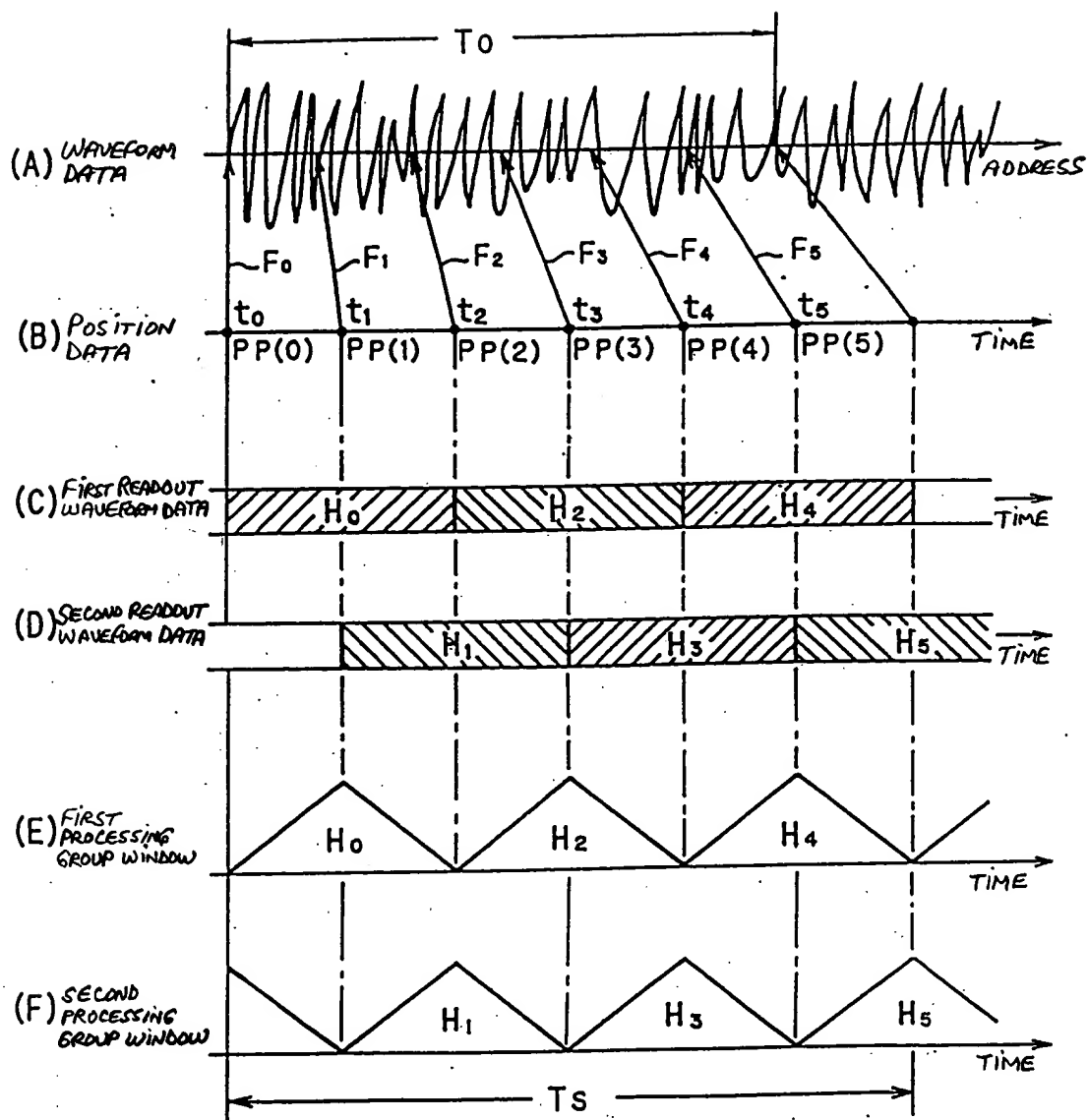


Fig. 2

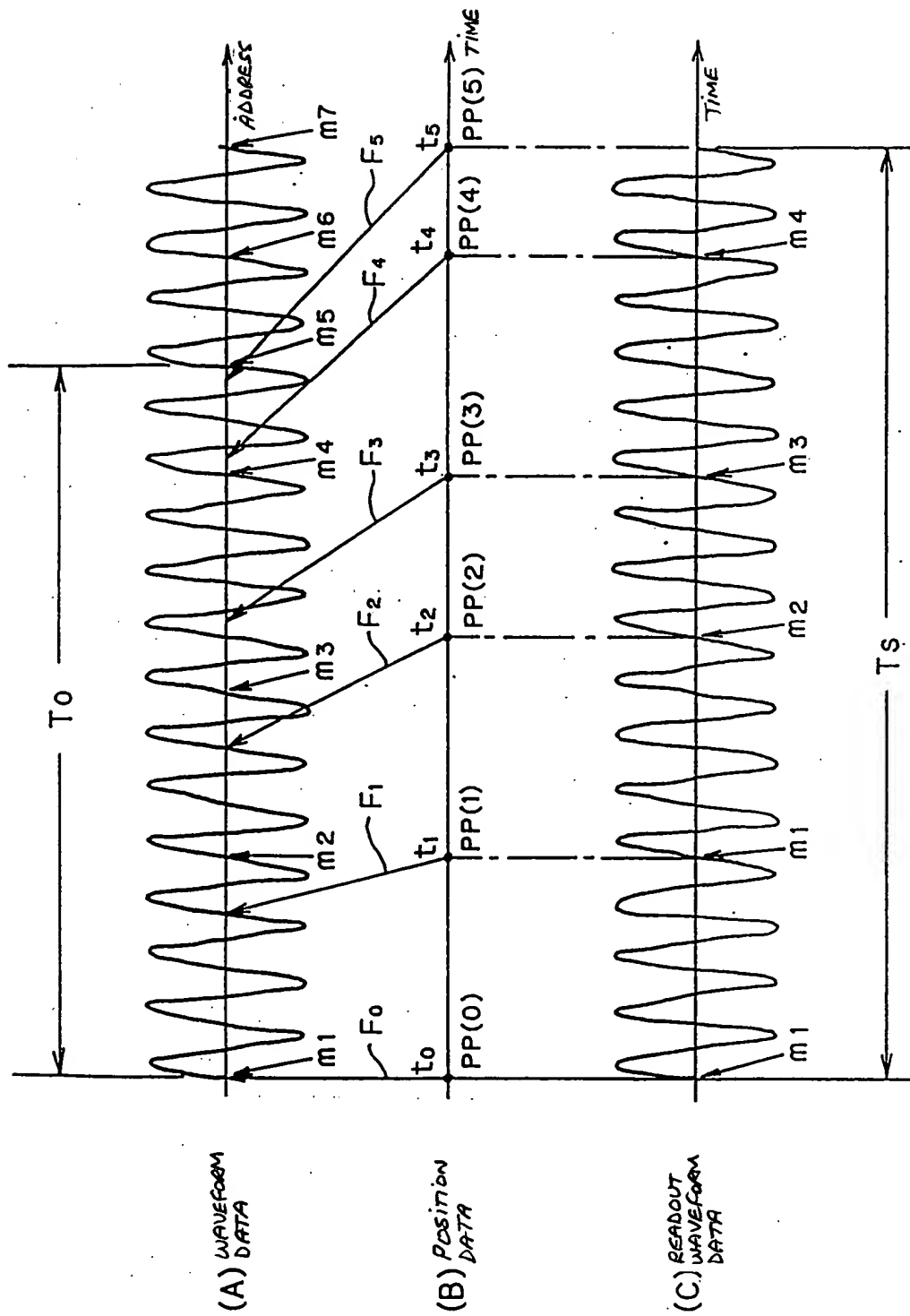


Fig. 3

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

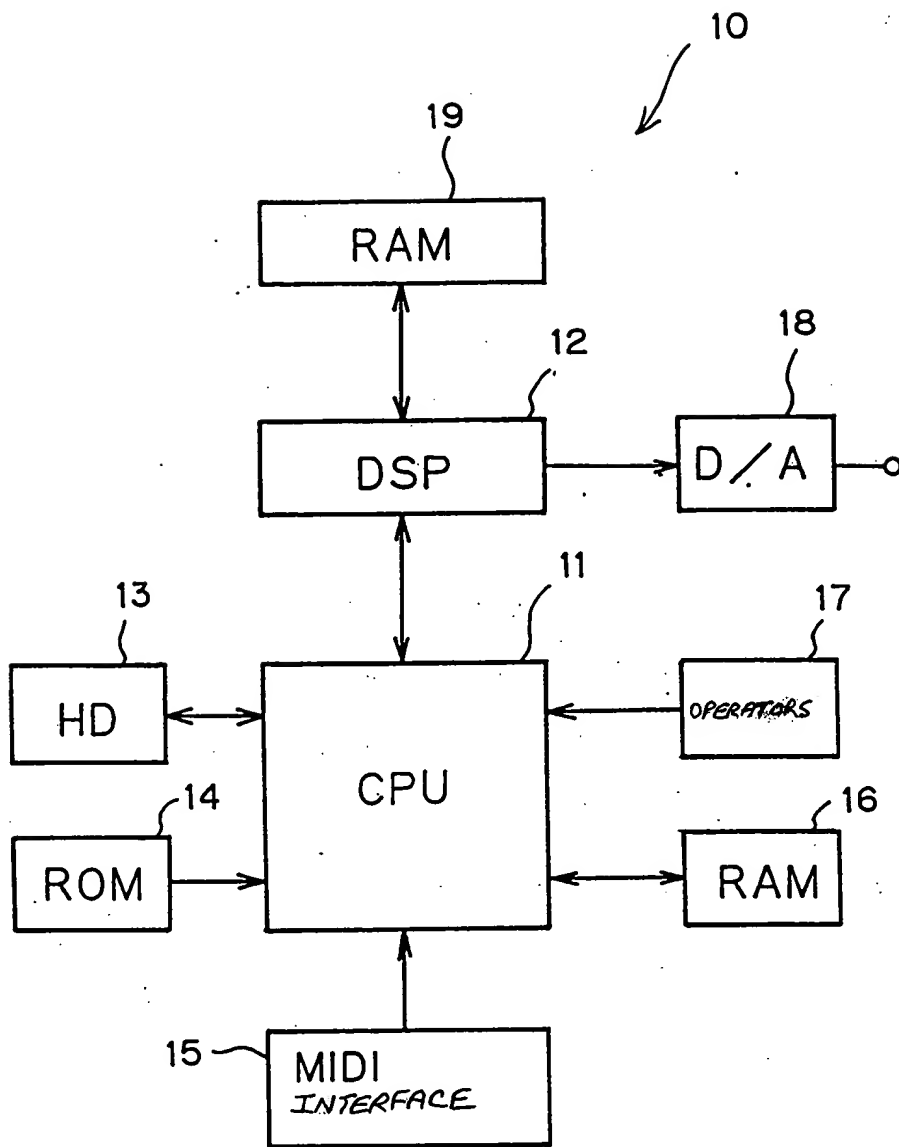
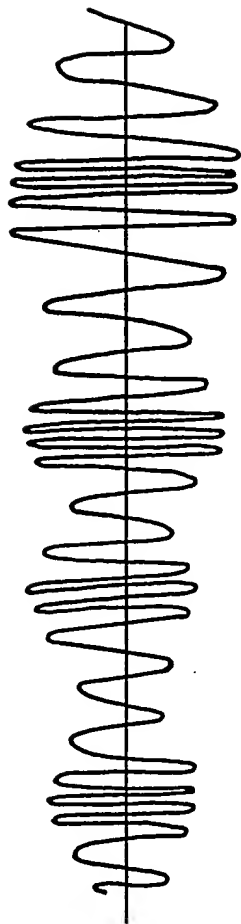


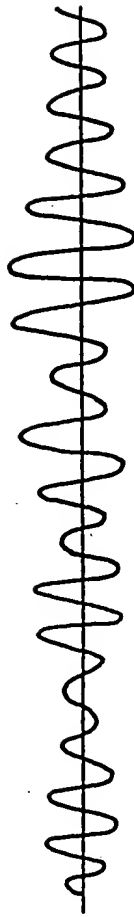
Fig. 4



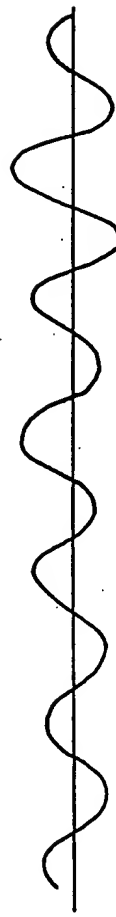
(A) ORIGINAL
WAVEFORM



(B) FIRST BAND
DIVIDED
WAVEFORM



(C) SECOND BAND
DIVIDED
WAVEFORM



(D) THIRD BAND
DIVIDED
WAVEFORM

Fig. 5

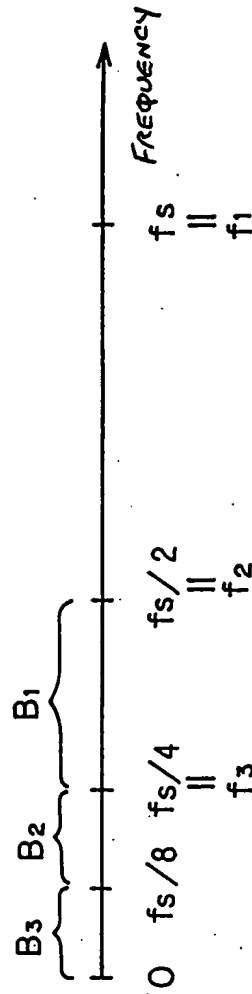


Fig. 6

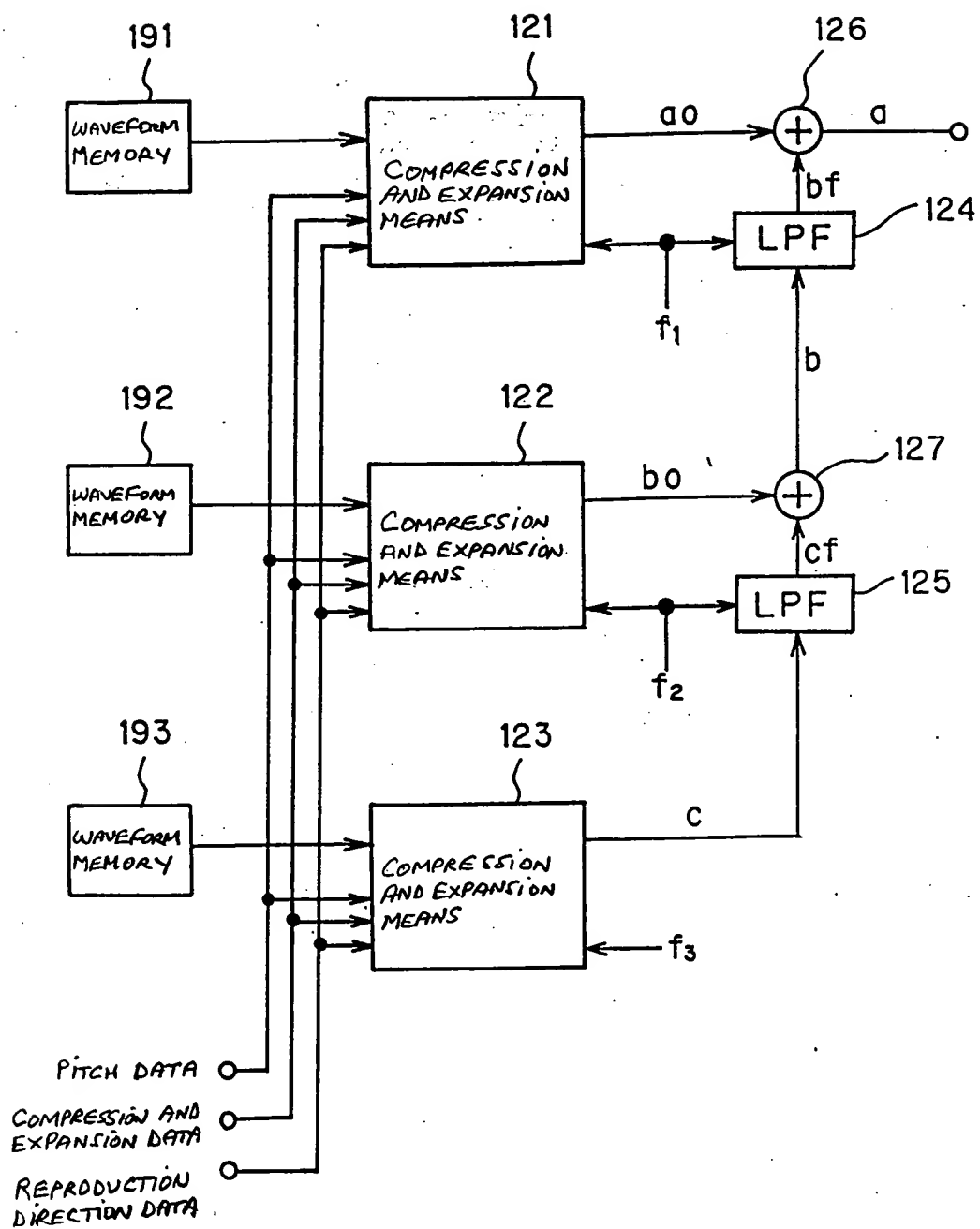


Fig. 7

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graph TD
    S101([START]) --> S102[INPUT OF PITCH DATA P AND COMPRESSION AND EXPANSION DATA TR]
    S102 --> S103{IS N A MULTIPLE OF 4?}
    S103 -- N --> S104[c ← 0]
    S103 -- Y --> S105[THE THIRD COMPRESSION AND EXPANSION PROCESSING IS EXECUTED AND THE OUTPUT C IS OBTAINED]
    S104 --> S105
    S105 --> S106{IS N A MULTIPLE OF 2?}
    S106 -- N --> S109[b ← 0]
    S106 -- Y --> S107[FILTER PROCESSING IS EXECUTED WITH C AND THE OUTPUT CF IS CALCULATED]
    S107 --> S108[THE THIRD COMPRESSION AND EXPANSION PROCESSING IS EXECUTED AND THE OUTPUT b0 IS OBTAINED]
    S108 --> S110[b ← b0 + cf]
    S109 --> S110
    S110 --> S111[FILTER PROCESSING IS EXECUTED WITH b AND THE OUTPUT bf IS CALCULATED]
    S111 --> S112[THE SECOND COMPRESSION AND EXPANSION PROCESSING IS EXECUTED AND THE OUTPUT a0 IS OBTAINED]
    S112 --> S113[a ← a0 + bf]
    S113 --> S114[Q IS THE OUTPUT]
    S114 --> S115{N ≥ 3?}
    S115 -- N --> S116[N ← N + 1]
    S115 -- Y --> S115Y[N ← 0]
    S116 --> S115Y
    S115Y --> S117([END])

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Fig. 8.

Figure 1 illustrates the process of windowing a signal. The diagram consists of five vertically stacked panels, labeled (A) through (E).

- (A) ORIGINAL WAVEFORM:** Shows a continuous signal over time. The signal is divided into three distinct regions labeled P_1 , P_2 , and P_3 . The horizontal axis is labeled "TIME".
- (B) WINDOW:** Shows three rectangular pulses labeled W_1 , W_2 , and W_3 , which define the time intervals for the data extraction. The boundaries are marked as a_{01} , a_{02} , a_{11} , a_{12} , a_{21} , and a_{22} . The horizontal axis is labeled "TIME".
- (C) FIRST WAVEFORM DATA:** Shows the signal from (A) restricted to the first window W_1 . The extracted signal is labeled P_1 . The horizontal axis is labeled "ADDRESS".
- (D) SECOND WAVEFORM DATA:** Shows the signal from (A) restricted to the second window W_2 . The extracted signal is labeled P_2 . The horizontal axis is labeled "ADDRESS".
- (E) THIRD WAVEFORM DATA:** Shows the signal from (A) restricted to the third window W_3 . The extracted signal is labeled P_3 . The horizontal axis is labeled "ADDRESS".

Fig. 9

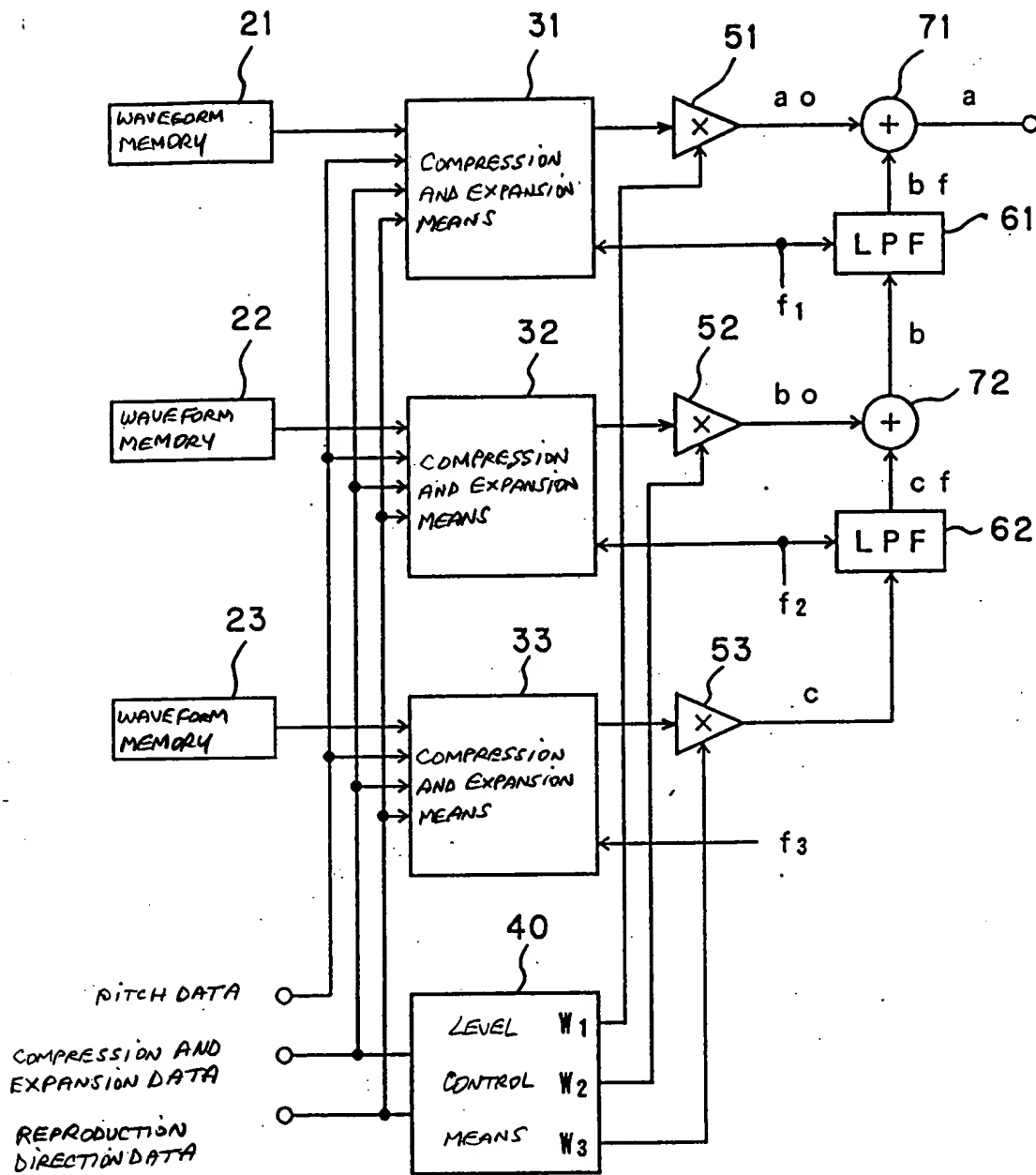


Fig.10

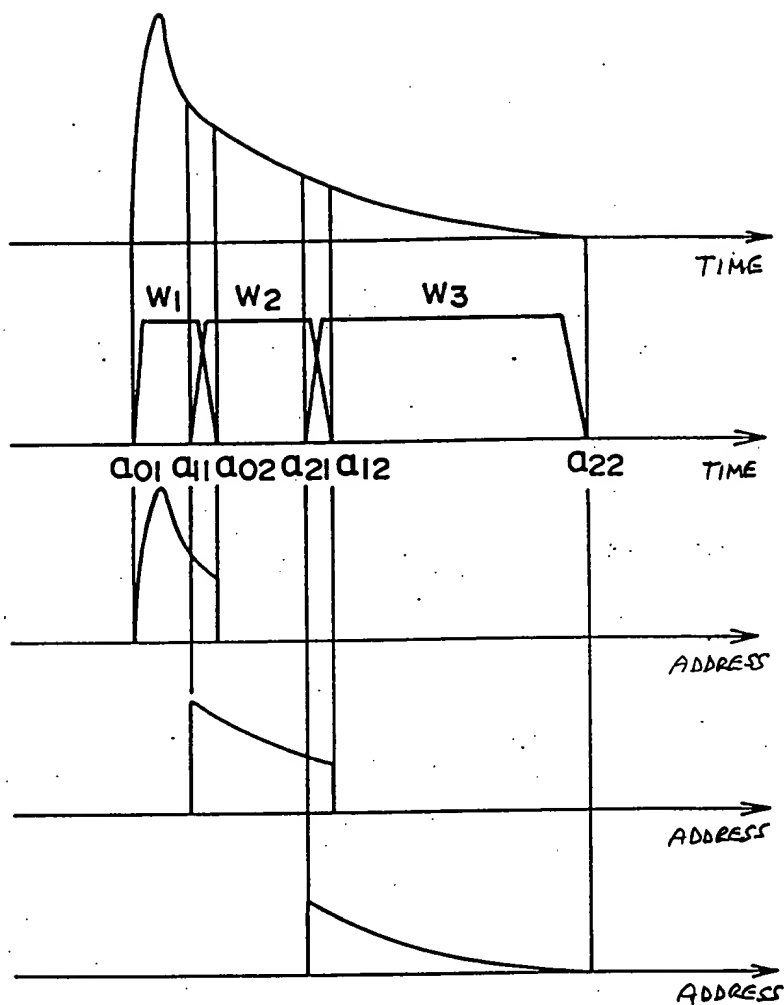
(A) ORIGINAL WAVEFORM

(B) window

(C) FIRST WAVEFORM DATA

(D) SECOND WAVEFORM DATA

(E) THIRD WAVEFORM DATA



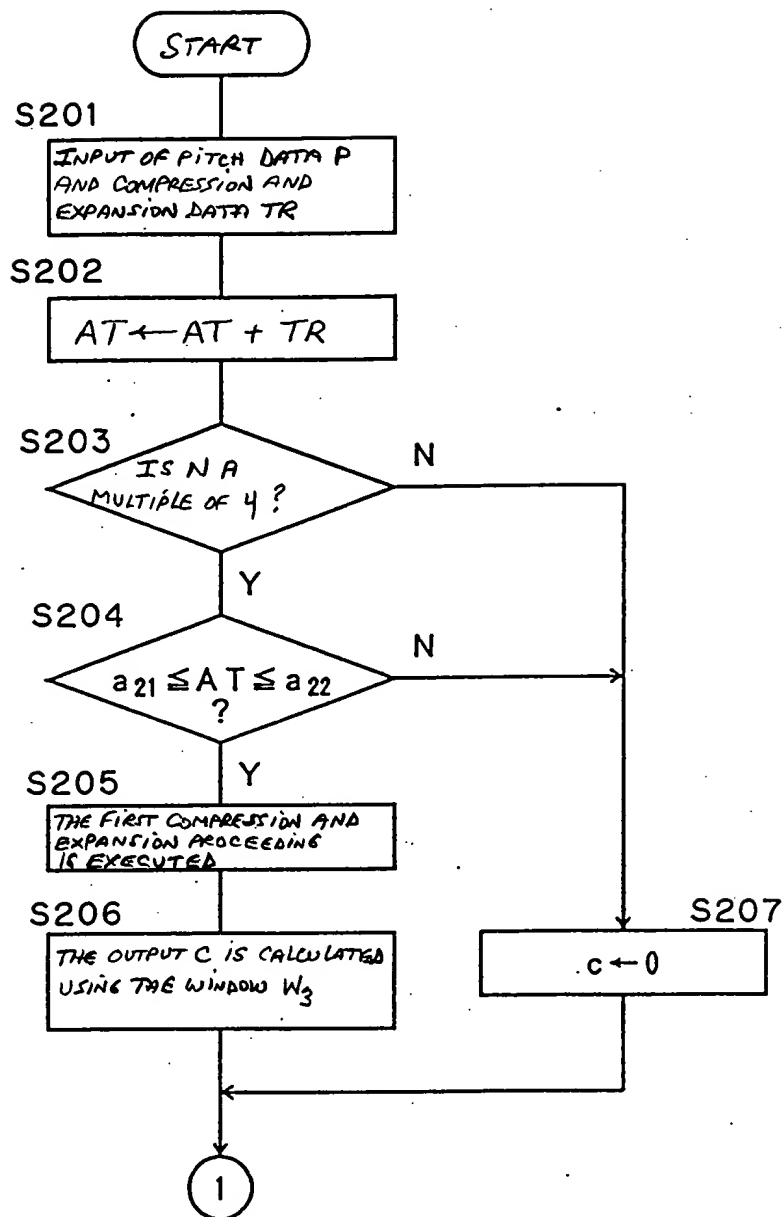


Fig.12

0945665-12099

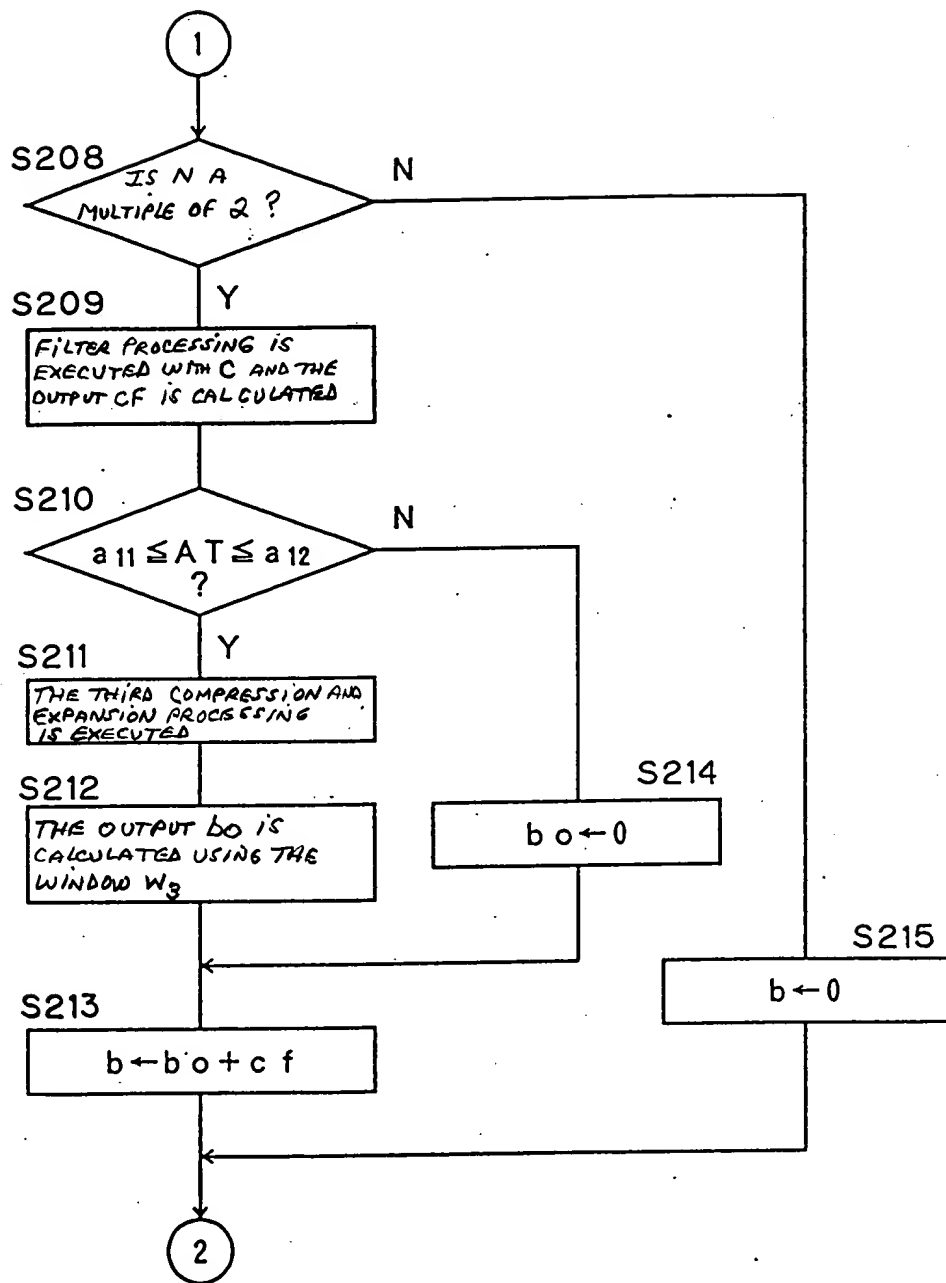


Fig.13

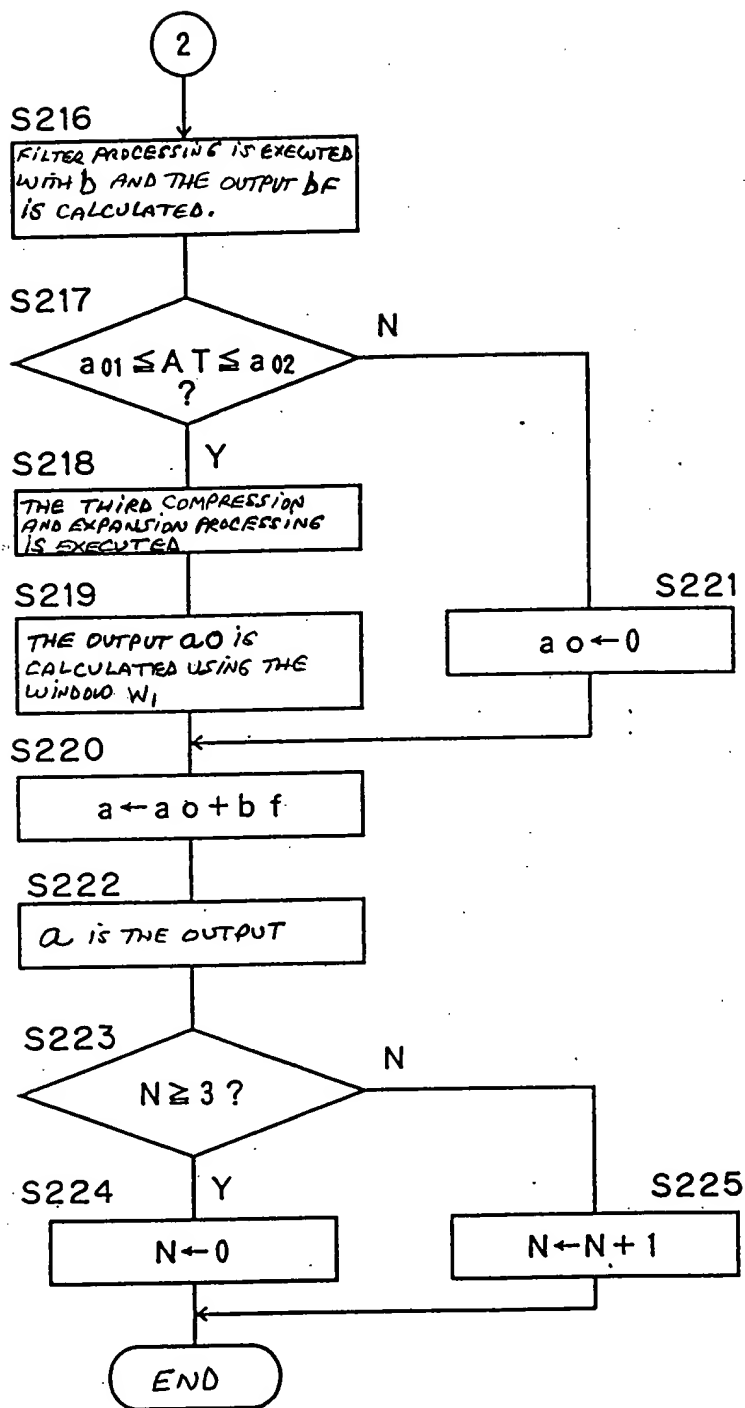


Fig.14